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In re Patent Application:

Serial No.: 09/557,990

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Inventors: Carducci et al.

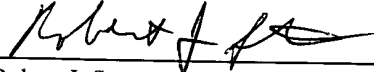
Title: Magnetic Barrier for Plasma in Chamber Exhaust

Examiner: Goudreau, G.

Group Art Unit: 1763

Attorney docket: AM 3536

CERTIFICATE OF MAILING: I certify that this correspondence is being deposited with the U.S. Postal Service, with sufficient postage as first class mail, addressed to the Commissioner for Patents, Washington, DC 20231, on the date entered below.



Robert J. Stern

March 31, 2003

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Commissioner for Patents
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RESPONSE TO RESTRICTION REQUIREMENT

Applicant hereby responds to the restriction requirement mailed 1/29/03.

Claims 1-12 and 26-46 remain pending.

Claims 2 and 3

Claims 2 and 3 were included in the list of pending claims on the Examiner's Form PTO-326 (Office Action Summary), but were omitted from the two groups of claims defined in paragraph 15 of the office action. Since these are apparatus claims, and since claim 2 is dependent on claim 1, Applicant assumes the Examiner intended to include claims 2 and 3 with the other apparatus claims in Group I.

Restriction Requirement

Applicant traverses the Examiner's restriction requirement, but provisionally elects Group I, the apparatus claims 1-12 and 32-38.

The Examiner contends the method and apparatus claims are distinct because the apparatus can be used to practice a materially different process, namely, a process without a plasma. Applicant disputes this contention because each of the apparatus claims recites a plasma chamber.

Furthermore, the restriction requirement is improper because all of the claims can be searched and examined without serious burden on the examiner. MPEP 803 states: "If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions."

Moreover, MPEP 811 requires that any restriction requirement after the claims already have been examined on the merits must be based on a consideration of "whether there will be a *serious* burden if restriction is not required."

The reason all claims can be searched and examined without serious burden is that the Examiner already searched and examined both the apparatus claims (Group 1) and the method claims (Group 2), and the Examiner applied the same grounds of rejection against both the apparatus and method claims. Specifically, in the office action mailed 7/31/02, paragraph 17, apparatus claims 1-2 and 4-6 were rejected on the same grounds as method claims 26-27 and 29-31. In paragraph 21, apparatus claim 3 was rejected on the same grounds as method claim 28.

Since the Examiner applied exactly the same art and exactly the same grounds of rejection against the apparatus and method claims, it is clear that the apparatus and method claims do not require a separate field of search or a serious burden of separate examination. Therefore, the restriction requirement is improper.

Claims 37-38 and 43-44


In the previous amendment, the undersigned attorney erroneously referred to claims 37 and 38 as method claims instead of apparatus claims.

Apparatus claims 37-38 and method claims 43-44 recite an annular exhaust channel having coaxially positioned first and second tubular walls. A first protrusion extends from the first tubular wall toward the second wall, and a second protrusion extends from the second tubular wall toward the first wall. Claims 37-38 and 44 further recite a magnet system having north and south poles within the first protrusion.

An advantage of the claimed invention is that the first and second protrusions extending from opposite walls increase turbulence of the exhaust gas flow, thereby increasing collisions of charged particles so as to promote quenching of any plasma entering the exhaust channel. The first protrusion deflects particles which otherwise would flow along the first wall, and the second protrusion deflects particles which otherwise would flow along the second wall. The magnet system further promotes collisions of charged particles, and hence plasma quenching, by transversely deflecting charged particles.

The Loewenhardt reference fails to disclose or suggest first and second protrusions extending from opposite walls. Therefore, claims 37-38 and 43-44 are patentable over Loewenhardt.

Respectfully submitted,



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